



WE WISH YOU A
WONDERFUL
HOLIDAY SEASON
AND A HAPPY
NEW YEAR!

DURHAM SOIL AND
WATER CONSERVATION
DISTRICT NEWSLETTER

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DURHAM
SOIL & WATER
CONSERVATION DISTRICT

*The soil is the source of life, creativity,
culture & real independence*

We're on the web

**[www.co.durham.nc.us/
departments/swcd](http://www.co.durham.nc.us/departments/swcd)**

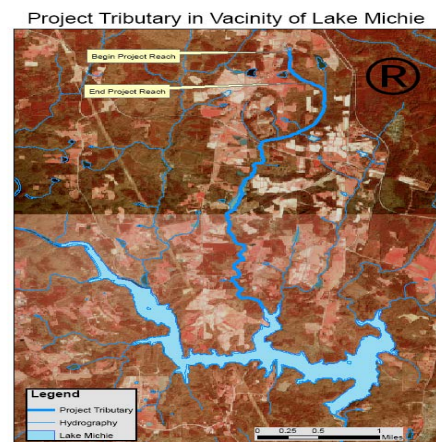
Stream Restoration– continued from pg. 1

The Durham Soil and Water District will hire a North Carolina licensed engineering firm with experience in designing natural channels in the Piedmont of North Carolina. The consulting firm will be required to perform the following tasks: 1) an existing condition survey, 2) bank-full verification, 3) reference reach analysis, 4) the natural channel design, 5) plans, specifications, and estimates, and 6) construction management. The consultant will implement these tasks to meet the following conceptual design.

A new meandering channel will be constructed in the open field adjacent to the existing stream in the upper 600 feet. The remaining channel will then be designed to meander through the existing forested floodplain, disturbing as little as possible of the existing vegetation. On both Reaches streambanks will be stabilized with root wads, vanes, constructed riffles and cross vanes if necessary for grade control. A riparian buffer will be established throughout the entire project to

include 150 to 400 feet of native hardwoods and shrubs along both sides of the stream.

The grant application was enhanced by the generous conservation easement donated by Mr. Thacker and will help the county financially in preserving farmland in perpetuity. Construction will begin in the spring of 2007. Below is an aerial photo of the project site.



Volume 2

Fall/Winter 2006

DURHAM SOIL AND WATER CONSERVATION DISTRICT
NEWSLETTER

CONSERVATION CORNER

Stream Restoration

The Durham Soil and Water Conservation District received word in November that it has been awarded another grant for stream restoration in the amount of \$275,000. This comes on the heels of receiving a Lick Creek stream restoration grant for \$539,000 in August of this year.

The District requested the grant from the NC Clean Water Management Trust Fund as part of a \$345,000 stream restoration project on a sediment impaired tributary to Lake Michie. The project is located on the property of Mr. Gerald Thacker in Bahama. The tributary drains directly to Lake Michie in the Neuse River Basin .

The project reach drains a small portion of northeastern Durham County in a relatively undeveloped a portion of the county. Channelization and straight-

ening of the stream channel in the past have resulted in a deeply incised stream bed with eroding vertical banks. The tributary has special significance as a water resource due to a number of important factors. The tributary is a water supply source for Lake Michie, providing water to the City of Durham and surrounding communities. The tributary has been designated by the Division of Water Quality (DWQ) as Nutrient Sensitive Waters. Nutrients that enter the tributary contribute to the overall water quality of Lake Michie as well as Falls Lake downstream and eventually the Neuse River Estuary below. The tributary itself is impacted with sediment and aquatic habitat is limited as a result.

The purpose of this project is threefold and includes: 1) Conversion



Lake Michie tributary

of 2,000 linear feet of the tributary from an eroding, degraded channel to a natural, stable system with excellent aquatic habitat, 2) Reduction of sediment loading to a water supply reservoir and 3) Establishment of large vegetated riparian buffers along the tributary, buffers along the tributary, which will be protected in perpetuity.

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CONTEST

The first person to correctly answer all of the question below and mail your answers into Lisa Marochak at Durham SWCD 721 Foster St Durham, NC 27701 will win a prize.

- 1.) Name two drinking water supply reservoirs in Durham County. _____
- 2.) What two river basins does Durham County lie within? _____
- 3). Traditionally what has been Durham's chief crop produced? _____
- 4) What famous family introduced this crop to Durham County? _____
- 5) Year Durham got its name _____
- 6) How many different soil types are found in Durham County? _____

Beaver Management Cost Share Program

Durham County Government has budgeted funds to the soil and water department this fiscal year to assist Durham County citizens with problems caused by beavers.



This program pays 80 percent and the landowner pays the other 20 percent of the cost of the project. The method used is called a water control structure which lowers the water level to prevent flooding of forest land, personal property and roadways, etc. where problem areas exist. This method does not kill the beavers but drops the water level low enough to avoid damage to timber, property and roadways, etc. If we have more applicants than funds available, a ranking system will be used to establish priorities for funding. The remaining applications will be held pending additional available funds for the program. If you have a need for beaver management assistance, please call our office @ 560-0558.

Mail box signs

The Durham Soil and Water Conservation District recently has initiated a new program that recognizes land owners for being Environmentally Friendly. The program will target land owners who have conserved, enhanced or promoted the county's natural resource base. Land owners may qualify by participating in a Federal and/or State Cost Share Program for installing Best Management Practices (BMP's), conducting a stream restoration project or allowing their land to be used for environmental education. Presently there are approximately 90 active Federal and State Cost Share Contracts in Durham County. The program has been a success locally as well as in neighboring counties. Below is a picture of Gerald Thacker who has a State Cost Share contract on his property as well as a grant funded (\$275,000) stream restoration project scheduled to begin in the spring of 2007.



Gerald Thacker, first recipient of the sign.

"If you order before December 21st, we'll gift wrap it for you for FREE! "

Rain Barrel, Bird Boxes & Wildflower Seed Sale

HOLIDAY SALE

As we approach the Holiday Season, we all know how hard it is to find that perfect gift. If the person on your list likes birds, loves working in the garden, or just has a passion for conservation then we have the perfect gift for them!

We have Blue Bird boxes, Bat houses, Wood Duck boxes, and an assortment of Wildflower Seeds for sale. If you order before December

21st, we'll even gift wrap it for you for FREE! Call or email us today to place your order while supplies last! *(Cash or checks made out to the 'Durham SWCD' will be accepted)* Order your Birdhouse or Wildflower Seeds today by calling or emailing Lisa at 919-560-0558, lmrochak@co.durham.nc.us.

Our last Rain Barrel sale for the year was held on October 28th, but for those who missed this chance to purchase one for yourself, don't

worry. The Conservation Station sale offering water efficient showerheads, bird boxes, wildflower seeds, and rain barrels will be back next spring! We will be sending out a flyer announcing the sale details after the first of the New Year, but you can expect the sale date to be sometime in early spring. In the meantime, you can still signup for a preordered Rain Barrel by calling or emailing Jennifer at 919-560-0558, jbrooks@co.durham.nc.us.

Upland Bird Habitat Buffer



- * Automatic enrollment for eligible acres
 - * Signing and cost-share bonuses
 - * Easy enrollment at any time
 - * Land owners or renters may enroll
- * Low cost to establish
 - * 10-year rental contracts
 - * Maintains agricultural use value
 - * Increased wildlife values

Habitat Buffers for Upland Birds are strips of volunteer vegetation around field edges that provide valuable nesting and brood cover for bobwhite quail and other wildlife, protect water quality and support integrated pest management.

The CRP Continuous Signup allows enrollment of land throughout the year in this important wildlife conservation practice.

How Much Money is at Stake?

Soil types and rental rates per type are posted in County FSA Offices

where the land is physically located. Rental payments are made each year for the

duration of the 10 year contract. In addition, each landowner will also receive a

signing Incentive Payment of \$100 per acre as soon as the contract is approved.

Who and What's Eligible?

Land owners or tenants may enroll in CRP. Land must have been row cropped in at

least four years during 1996 to 2001.

What's Expected?

*Enroll crop field edges consisting of volunteer vegetation buffer strips.

Landowners can enroll widths of between 30 and 120 feet.

*Controlling woody plants and managing habitat using one or more of the following methods on 1/3 to 1/2 of the buffer each year:

- light fall or winter disking, or
- prescribed burning,
- And spot applied-herbicide (as needed)

*Install marking posts for identification of buffer edges and to provide "aiming sticks" for equipment operators.

*Controlling woody plants, and exotic grasses like tall fescue, Bermuda grass and bahia grass.

*Use a grain cover crop like

wheat (if specified in the conservation plan), where needed to protect soil from erosion until native plants have a chance to reclaim the area.

Important Facts

* Buffers are **not** wildlife food plots.

* Buffers are **not** for production of hay, forage, or crops

* Buffers are **not** turn rows or field roads

* Buffers are **not** storage areas for crops or equipment

*Buffers are protected from disking, mowing and fire during the nesting period (April 15- September 15.)

For more information contact the USDA Service Center in Hillsborough at (919) 644-1079 or the Durham Soil and Water Conservation District at (919) 560-0558

Centerfest

Our office set up a booth this year at the Durham Centerfest Arts Festival. The Centerfest was held September 16-17. We had a Rain Barrel on display that we demonstrated how to use. We sold Blue bird boxes, duck boxes and wildflower seeds. We took our new wheel of conservation with us to the Centerfest.

The wheel was a huge success with the kids and adults. The Wheel of conservation was made by Mr. Don Ramsey's wood working class at Southern High School



Big Sweep

October 7, 2006 might have been a cold and wet Saturday, but even the drizzling rain couldn't discourage some local citizens from wading hip deep in Durham's streams to clean up any trash they found. These concerned citizens were participating in NC Big Sweep 2006, the nation's first statewide waterway cleanup, celebrates its 20th anniversary this year. NC Big Sweep is active in all 100 counties, including Durham. This year's event was coordinated by the Durham Soil and Water Conservation District and the City of Durham, along with Keep Durham Beautiful, Inc. (KDB). Though October 7th was the official date of this year's cleanup, some groups set cleanups on other dates in September, October, and into November.



Despite the presence of a No DUMPING sign, Cub Scout Pack 424 cleaned up several huge mounds of trash from the Avondale Beaver Pond behind Big Lots

The Durham Sail and Power Squadron held a cleanup out at Jordan Lake on September 16, 2006. On the official October 7th date, five different groups participated in cleanups. The Northgate Park Neighborhood Association concentrated on Ellerbe Creek from Lavender Ave to Avondale. Cub Scout Pack 424 tackled the

Avondale Beaver Pond behind Big Lots. Triangle Day School cleaned up the stream running through the Walltown Park. The Northeast Creek Stream Watch could be found at Northeast Creek in the Parkwood neighborhood. The Forest Hills Neighborhood Association participated by cleaning the Third Fork Creek that runs through the Forest Hills Park. On Sunday, October 8th Girl Scout Service Unit 207 could be found working on the Little Lick Creek in the Birchwood Park area. The Carolina Canoe Club in partnership with the Duke Chapter Society of American Foresters cleaned up New Hope Creek near Erwin Rd on November 11th. Even Durham County's General Services departments and the City of Durham's Solid Waste department got in on the cleanup efforts this year by holding their own cleanup or helping out with others.

150 volunteers cleaned an estimated 35 miles in Durham County this year and picked up over 7,000 pounds of trash. Besides filling over 300 bags of trash, there were numerous unbaggage items found. These items included; an assortment of car parts, signs, shopping carts, building materials, carpet, furniture, playground equipment, plumbing, tv with remote, crutches, metal poles, sev-



The City of Durham's Solid Waste Department wadding through Ellerbe Creek to haul out submerged trash such as this huge drum barrel.

eral cans of used motor oil, and a BBQ grill.

The Durham Soil and Water Conservation District will coordinate Durham's Big Sweep events again next year. If you are interested in forming a group or just want to join another group, please contact us anytime between now and late next summer to be included on a signup list. Interested groups or individuals can contact Jennifer at (919)560-0558 or jbrooks@co.durham.nc.us.



Walltown Park's adjacent creek was the former resting place of all this trash.



Pre-commercially Thin Your Pines for Tree Health & Growth

Trees are very similar to tending a vegetable garden. Many times you need to thin out the vegetable plants to an adequate number to produce larger vegetables and have a healthier plant. The same plants in a hill can also compete against one another and require thinning, for example seeding six plants and thinning to three plants later. Once again thinning is used to promote the health and growth of the vegetable plants, as well as to produce larger vegetables. Tending or managing a stand of pines is very similar.

Once timber stands containing pine are harvested, natural pine regeneration may typically occur from pines previously standing in the harvested area or from pines on adjoining property. Pines typical to this area (ex. loblolly, Virginia, short-leaf), typically drop seed during the Fall with germination occurring in the following Spring and Summer. Many times the natural regeneration is successful and overstocks the young cut-over with pines. Also, many times the harvested stand may be planted with pines to insure successful regeneration. However, natural pine regeneration may also occur with the planted pines and overstock the young stand.

Any given piece of property will produce a certain amount of wood volume. The wood volume can be concentrated into a large number of small trees or concentrated into a small number of large trees. In order to gain the most monetary potential from your pine stands, you need to grow sawtimber, which is emphasized by a small number of larger trees.

In pine stands, which are overstocked, tree growth will be extremely slow. Small diameter trees will dominate the stand until natural thinning processes occur. However, natural thinning is a long and slow process. This then requires a longer time period to produce sawtimber sized trees when managing for timber. Also, the overstocking and poor growth of the trees increases the stands susceptibility to pests and disease infestation with the greatest concern being infestation by the southern pine beetle.

The southern pine beetle is a small beetle, which attacks southern yellow pine species. It is drawn to stands of pines or single pine trees that are under stress. Such things as drought, old age, poor growth, declining tree health, and stand overstocking can cause stress. Once the southern pine beetle is attracted



to a tree, it bores into the bark. It then begins to create galleries under the bark and lay eggs. The developing larvae feed on the inner bark of the tree. Once adulthood is reached, the beetles fly to another tree to attack it.

The galleries created by the beetles girdle the tree and cut off the flow of water and nutrients. The beetles also introduce a blue stain fungus, which clogs the trees' tissues, which hampers water movement. These problems then lead to the death of the tree.

One of the best ways to help reduce or prevent the threat of southern pine beetle infestation and to also help maintain the health and growth of your pines is to maintain adequate stocking levels. This is best achieved in young overstocked stands of pines by pre-commercially thinning.

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The best time to perform a pre-commercial thinning is during the ages of 3 to 5 years. This helps to reduce cost of the work and helps to optimize tree growth. However, pre-commercial thinning can be applied in older stands also, but the rule still being the earlier the better.

Crews utilizing gas-powered brush cutters or chainsaws typically do pre-commercial thinning. The objective is to leave the best and most desired trees (ex. tallest trees, straight stem, well developed crown, free of insects or disease) spaced roughly 10 to 12 feet apart, while cutting all other trees. Cut trees are left where they fall to rot and decay.

Not only does pre-commercial thinning promote growth on the trees and help to maintain health, the stand is also opened up. By opening up the stand, sunlight can more readily reach the forest floor and promote growth of grasses, browse, herbs, forbs, and other young successional vegetation. This young successional vegetation helps to provide food, browse, nesting, bugging, and cover habitat for a wide variety of animals and birds. Pre-commercial thinning also lessens the time it takes to produce sawtimber and also shortens the time that income can be generated by commercial thin-

ning practices or sawtimber harvesting.

If you have an overstocked stand of young pines, the benefits of implementing a pre-commercial thinning are numerous.



By: Rob Roberson

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In order to encourage landowners to implement pre-commercial thinning, cost-share assistance is available through the Southern Pine Beetle Prevention Program to qualifying landowners. This program reimburses 70% of the actual cost of the work or a set prevailing rate, whichever is less.

For additional information on pre-commercial thinning or the Southern Pine Beetle Prevention Program, please contact your local NC Forest Service office. The NC Forest Service – Durham County Office is located near the old Durham Bulls Ballpark and the County Ranger Wayne Williams or Assistant George Brown can be reached at 919-560-0562.